Anton Krotenok (NETID: ak1847)

Kevin George (NETID: kmg328)

1. Team details: Clearly state the names and netids of your team members (there are 2 of you).

**Anton Krotenok (NETID: ak1847)**

**Kevin George (NETID: kmg328)**

2. Collaboration: Who did you collaborate with on this project? What resources and references did you consult? Please also specify on what aspect of the project you collaborated or consulted.

**Both partners utilized past knowledge from classes including Computer Architecture, Software Methodology, and Principles of Information and Data Management.**

3. Briefly discuss how you implemented each function: setting up interface configurations, setting up default routes, and setting up the routes for each destination.

First we set up the host ip addresses using the mininet commands for h1 to h5. Then we implemented the default routes for the first router to the hosts/ip addresses. Next we routed the first router to all the hosts. All routes were setup using various minimap commands.

4. Is there any portion of your project that does not work as required in the description above? Please explain.

**There is no portion of our project that does not work as required in the description above.**

5. Did you encounter any difficulties? If so, explain.

**The main problem we encountered was simply understanding the instructions because they were very confusing and didn’t describe the project well.**

6. Describe one technical observation or facts you learned while working on this project. Please answer in specific and precise terms. Your observations could relate to topics involving the network layer in general, your implementation of network configuration in this project, the specific commands you used, or other topics that are relevant to your implementation of this project. Please ensure your responses are clear, specific, and technical.

We observed that the process of setting up the IP network required tools like *ping* and *traceroute* to set up end-to-end connectivity. Interestingly, it was a new experience working with Linux containers (via *mininet*) to create the network. It was required that we download a virtual machine (not just SSH) and run the terminal commands on there. We ran the attached network topology file and remembered that “sudo” is a request to temporarily elevate your current user account to have root privileges. Likewise, we learned about the correct configuration of the interfaces and routes and how you “test” the connectivity by pairing any or all endpoints with the router.Since the *mininet* does not have its own graphical interface, we all had to learn the commands manually (although some things can be accomplished with SSH via *tmux* and *screen*).